



## Excellent Integrated System Limited

Stocking Distributor

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[Visual Communications Company, LLC](#)  
[VAOL-3MSBY2](#)

For any questions, you can email us directly:

[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

## SUPERBRIGHT LED LAMP

### VAOL-3MSBY2

#### Feature

- Low Power Consumption
- High Intensity
- I.C. compatible

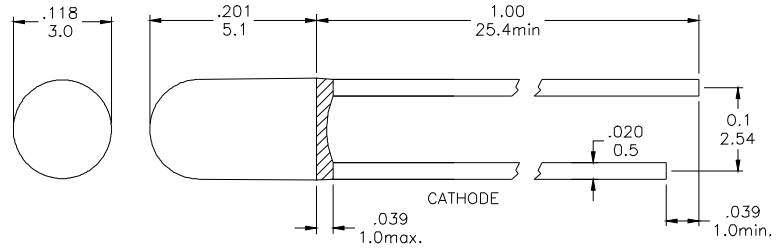
#### Applications

- Commercial Outdoor Sign Board
- Front Panel Indicator
- Dot-Matrix Module
- LED Bulb

#### Description

- These High Intensity LEDs are Based on InGaN/Sapphire Material Technology
- Emitted color:Blue
- Blue Diffusion Lens

#### Package Dimension



\* Tolerance:  $\frac{0.01}{0.25}$  Unit:  $\frac{\text{inch}}{\text{mm}}$

#### Absolute Maximum Ratings at Ta=25°C

Symbol	Parameter	Max.	Unit
PD	Power Dissipation	120	mW
VR	Reverse Voltage	5	V
IAF	Average Forward Current	30	mA
IPF	Peak Forward Current (Duty=0.1, 1kHz)	100	mA
—	Derating Linear Form 25°C	0.4	mA / °C
Topr	Operating Temperature Range	- 40 to + 80	°C
Tstg	Storage Temperature Range	- 40 to + 100	°C

Lead Soldering Temperature [1.6mm (0.063inch) From Body] 260°C For 5 Seconds.

#### Electrical / Optical Characteristics and Curves at Ta=25°C

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
VF	Forward Voltage	IF= 20 mA		3.5	4.0	V
IR	Reverse Current	VR= 5 V			50	μA
$\Delta \theta$	Half Intensity Angle	IF= 20 mA		60		Deg.
IV	Luminous Intensity	IF= 20 mA		1200		med.
$\lambda d$	Dominant Wavelength	IF= 20 mA		470		nm

### Electrical Characteristics at Ta=25°C

Symbol	I <sub>v</sub>		V <sub>F</sub>		λ D	
Parameter	Luminous Intensity		Forward Voltage		Dominant Wavelength	
Condition	IF=20mA		IF=20mA		IF=20mA	
Unit	mcd		V		nm	
Binning	Grade	Range	Grade	Range	Grade	Range
	BIN16	950~1300	P1	3.0~3.2	B5	460~465
			P2	3.2~3.4	B6	465~470
			P3	3.4~3.6	B7	470~475
			P4	3.6~3.8		
			P5	3.8~4.0		

Intensity: Tolerance of minimum and maximum = ± 15%

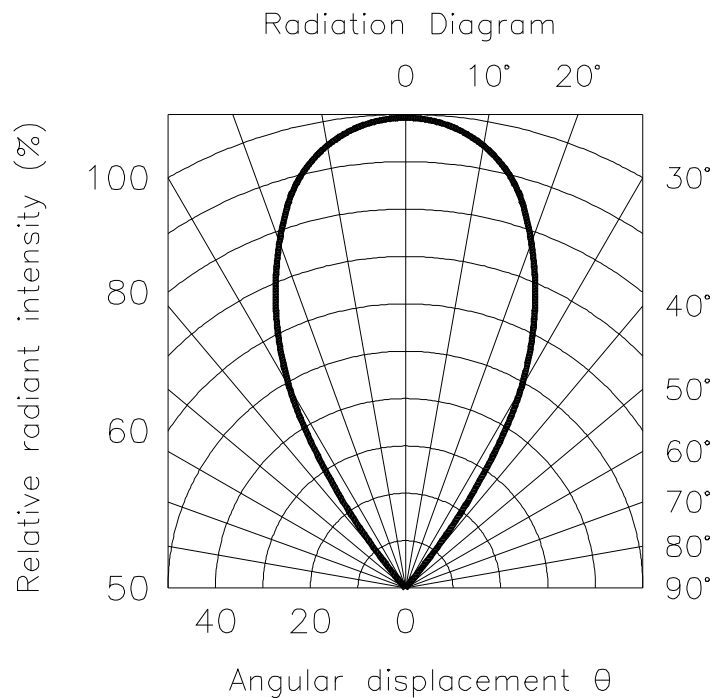
V<sub>F</sub>: Tolerance of minimum and maximum = ± 0.05v

NOTE:

1. Static electricity and surge damages the LED. It is recommend to use a anti-static wrist band or anti-electrostatic glove when handing the LEDs. All devices, equipment and machinery must be properly grounded.
2. Specific binning requirements- please contact our home office

### Radiation Diagram

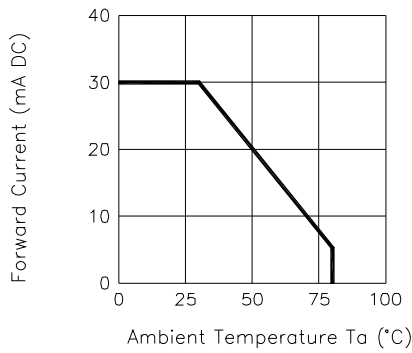
IF=20 mA    50% Power Angle    Angle =60°



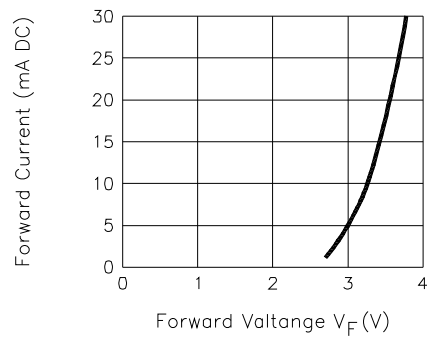
## BLUE

### Typical Electro-optical Characteristic Curves (25°C Free Air Temperature Unless Otherwise Specified)

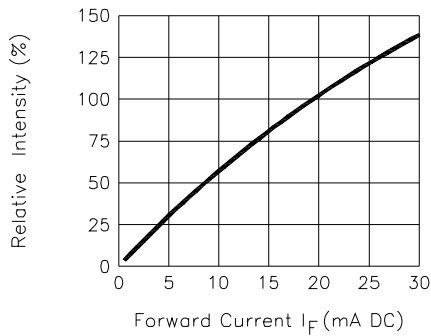
Forward Current  
 Vs. Ambient Temperature



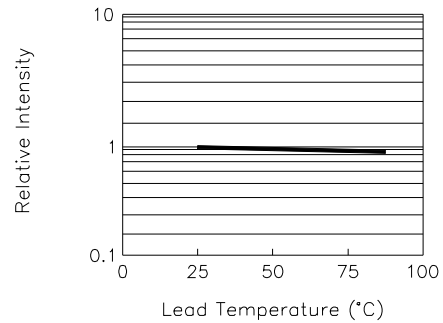
Forward Current  
 Vs. Forward Voltage



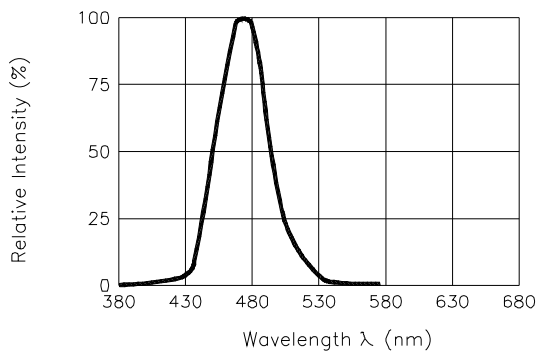
Relative Intensity  
 Vs. Forward Current



Relative Intensity  
 Vs. Lead Temperature  
 (Pulsed 20 mA; 300us pulse,  
 10ms period)



Relative Intensity Vs. Wavelength



Peak Forward Voltage  
 Vs. Forward Current  
 (100us test pulse,  
 1% duty cycle)

